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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,702	05/25/2001	Thorbjorn Andersson	027650-930	2294

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EXAMINER
SIMONE, CATHERINE A

ART UNIT	PAPER NUMBER
1772	11

DATE MAILED: 03/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/856,702	ANDERSSON ET AL.	
	Examiner	Art Unit	
	Catherine Simone	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 9-37* is/are pending in the application.

4a) Of the above claim(s) *22-28 and 31* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,9-21,29,30 and 32-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-5, 9-14, 16, 29, 30** and **32-35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (5,500,303) in view of Heider (5,405,667).

Anderson discloses a multilayer structure for packaging comprising an intermediate layer of an expanded polymer (Fig. 11, #110) and on each side of the expanded polymer layer, a gas barrier layer (Fig. 11, #20 and #30). However, Anderson fails to disclose the expanded polymer material comprising a first rigid component and a second ductile component. Heider teaches that it is old and well known in the analogous art to have an expanded polymer material comprising a first rigid component and a second ductile component (Fig. 2, #18; also see col. 4, lines 46-54) for the purpose of producing a multilayer structure for packaging.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the expanded polymer material in Anderson to comprise a first rigid component and a second ductile component as suggested by Heider in order to produce a multilayer structure for packaging.

Furthermore, Anderson fails to disclose the specific resistance/rigidity of at least 100 mN and the material of the gas barrier layer having a specific oxygen gas permeability of at most

about 2000 cm^3/m^2, at 23°C and 0% RH, per 1 μm thickness, during 24 hr. at 1 atm. However, Anderson discloses the calculation of the resistance of the barrier layer (col. 8, lines 66-68), and the oxygen gas permeability (col. 2, lines 2-7). Therefore, one of ordinary skill in the art would have recognized that the resistance/rigidity and the oxygen gas permeability are deemed cause effective variables in the multilayer structures as shown by Anderson.

Thus, it would have been obvious to one of ordinary skill in the at the time the applicant's invention was made to have optimized the value of a cause effective variable such as resistance/rigidity and oxygen gas permeability in Anderson since Anderson discloses the calculation of the resistance of the barrier layer and the oxygen gas permeability, and further, it has been held that to determine the optimum value of a cause effective variable such as resistance/rigidity and the oxygen gas permeability would be through routine experimentation in the absence of a showing of criticality in the claimed ranges. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Regarding **claim 2**, the outermost layers comprise a heat sealable thermoplastic polymer (see col. 15, lines 33-35). Regarding **claim 3**, the expanded polymer layer in its cells and/or open cavities (Fig. 11, #120) is filled with an anaerobic gas (see col. 14, lines 2-4). Regarding **claims 4** and **32**, the expanded polymer inherently has at least about 500 cells/mm^3. Regarding **claim 5**, the expanded layer has cells, which appear to be substantially closed without connection between the cellular cavities. Regarding **claim 9**, note the first rigid polymer component is of a high density polyethylene (see col. 4, line 51) and the second ductile component is of a low density polyethylene (see col. 4, line 48). Regarding **claims 10** and **33**, the mixing ratio of the first, rigid polymer component to the second, ductile polymer component in the expanded polymer layer is

inherently between 1:3 and 3:1. Regarding **claim 11**, the gas barrier layer comprises polyvinylidene chloride (PVDC) (see col. 4, line 66). Regarding **claim 12**, note a homogeneous layer on each side of the expanded polymer layer comprising a polymer selected from a group as recited in claim 12 (see col. 4, lines 65-67 and col. 5, line 1). Regarding **claim 13**, the gas barrier layers on each side of the expanded polymer layer have a thickness and comprise polyamide (see col. 4, lines 52-54 and lines 65-67). Regarding **claim 16**, the gas barrier layer appears to be directly bonded to the expanded polymer layer (see col. 13, lines 39-42). Regarding **claims 29** and **30**, note dimensionally stable packaging container manufactured from the multilayer structure (see col. 2, lines 29-32). Regarding **claims 34** and **35**, note the material of the gas barrier layers is polyamide (PA) (see col. 4, lines 65-67).

Regarding **claim 14**, process limitations are given little or no patentable weight. The method of forming the product is not germane to the issue of patentability of the product itself. Further, when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the Applicant to present evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F.2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974). This burden is NOT discharged solely because the product was derived from a process not known to the prior art. *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974).

Furthermore, the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable

even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 946, 966 (Fed. Cir. 1985) and MPEP §2113. In this case, the limitation "by means of co-extrusion of the layers" is a method of production and therefore does not determine the patentability of the product itself.

2. **Claims 15, 17, 18, 20, 21, 36** and **37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (5,500,303) in view of Heider (5,405,667) and in further view of Bauer et al. (5,093,164).

Anderson and Heider disclose the claimed invention, but both fail to disclose a paper layer and a gas barrier layer comprising polyvinyl alcohol (PVOH) and an ethylene acrylic acid copolymer (EAA). Bauer et al. teaches a paper layer (see col. 2, lines 55-57) and a gas barrier layer comprising polyvinyl alcohol (PVOH) and an ethylene acrylic acid copolymer (EAA) (see col. 4, lines 17-20 and col. 5, line 48) in the art for the purpose of forming a multilayer packaging material having good barrier to transmission of one or more gases.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided a paper layer to each side of Anderson's expanded layer as suggested by Bauer et al. and provided the gas barrier layer in Anderson with polyvinyl alcohol and an ethylene acrylic acid copolymer (EAA) as suggested by Bauer et al. in order to provide a multilayer packaging material having good barrier to transmission of one or more gases.

Furthermore, Bauer et al. fails to disclose the paper layer having a surface weight of between about 30 g/m^2 and about 60 g/m^2. However, Bauer et al. does teache a paper layer having a surface weight of 65 g/m^2 (see col. 12, line 49). Therefore, one of ordinary skill in the

art would have determined the surface weight of the paper layers through routine experimentation depending on the desired end results as shown by Bauer et al. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have the paper layers in Bauer et al. to have a surface weight of between about 30 g/m^2 and about 60 g/m^2, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art absence of showing unexpected results. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

Regarding **claim 18**, process limitations are given little or no patentable weight. The method of forming the product is not germane to the issue of patentability of the product itself. Further, when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the Applicant to present evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F.2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974). This burden is NOT discharged solely because the product was derived from a process not known to the prior art. *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974).

Furthermore, the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 946, 966 (Fed. Cir. 1985) and MPEP §2113. In this case, the limitation "the gas barrier polymer has

been applied onto the paper layers by means of liquid film coating technology" in **claim 18** is a method of production and therefore does not determine the patentability of the product itself.

3. **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (5,500,303) in view of Heider (5,405,667) and in further view of Bauer et al. (5,093,164) and in further view of Kato et al. (5,527,622).

Anderson, Heider and Bauer et al. disclose the claimed invention except for the gas barrier polymer material comprising a carboxylic acid group. Kato et al. teaches a gas barrier polymer material comprising a carboxylic acid group (see col. 2, lines 30-40) in the art for the purpose of providing high heat-sealing strength in a packaging laminate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the gas barrier polymer layer in Bauer et al. with a carboxylic acid group as suggested by Kato et al. in order to provide high heat-sealing strength in a packaging laminate.

Response to Arguments

4. Applicant's arguments with respect to claims 1-5, 9-21, 29, 30, and 32-37 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (703) 605-4297. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (703) 308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

CAS

Catherine Simone
Examiner
Art Unit 1772

February 21, 2003

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

2/21/03